

We Claim:

1. A substrate of a disk for recording information, wherein
said substrate is made of glass containing SiO_2 in an amount of 40-80% by weight, Al_2O_3 in an amount up to 17% by weight, and at least one rare earth element selected from the group consisting of Sc, Y, Pr, Nd, Pm, Sm and Eu, and has a transmittance for visible white light of said substrate is at least 60% and a surface roughness of 5 nm or less.
2. A substrate according to claim 1, wherein
said substrate comprises fine particles having an average particle size in the range of 1 - 100 nm and a glass matrix, and said fine particles are dispersed in said glass matrix.
3. A substrate according to claim 2, wherein
said fine particles are crystalline and
said glass matrix is amorphous.
4. A substrate according to claim 2, wherein
said glass matrix is any of soda lime glass and silicates glass.
5. A substrate according to claim 2, wherein
said rare earth element is included in said fine particles and said glass matrix.

6. A substrate according to claim 2, wherein
a volume fraction of said fine particles is in the range of 1% - 40% to
the total volume of said substrate.
7. A substrate according to claim 1, wherein
said substrate has a hardness at least Hv 640.
8. A substrate according to claim 1, wherein
said substrate has thermal expansion coefficient in the range of 70 -
 130×10^{-7} .
9. A substrate according to claim 1, wherein
said substrate includes said rare earth element in the range of 0.5 -
15% by weight to the total amount of said substrate on a basis of converted
weight to oxide Ln₂O₃ (Ln is rare earth element).
10. A recording information disk comprising a layer for recording
information and a substrate, wherein
said substrate is the substrate claimed in claim 1.
11. A recording information disk comprising a magnetic disk comprising the
substrate according to claim 1 and a layer for recording information
comprising a magnetic recording medium film.

12. A recording information disk according to claim 11, wherein
said magnetic recording medium film is formed directly on the surface
of said substrate.
13. A recording information disk according to claim 10, wherein
said recording information disk is a photodisk or a photomagnetic disk,
the thickness of said substrate is, at the utmost, 0.38 mm, and
the diameter of said substrate is at least 2.5 inches.
14. An information recording disk apparatus comprising a disk for
recording information,
a head for reading out information from said disk or inputting
information to said disk,
a driver for said disk, and
a driver for said head, wherein
said disk is the recording information disk claimed in claim 10.
15. An hard disk apparatus comprising a magnetic disk for recording
information,
a head for reading out information from said magnetic disk or inputting
information to said magnetic disk,
a driver for said magnetic disk, and
a driver for said head, wherein

said magnetic disk comprises the substrate claimed in claim 1.

16. A photomagnetic disk for recording information, comprising the substrate according to claim 1.

17. A substrate of a disk for recording information, wherein
said substrate is made of glass containing SiO_2 in an amount of 40-80% by weight, Al_2O_3 in an amount up to 17% by weight, and at least one rare earth element selected from the group consisting of Sc, Y, Pr, Nd, Pm, Sm and Eu, has a transmittance for visible white light of said substrate is at least 60% a surface roughness of 5 nm or less, and is made without a chemical strengthening treatment or crystallizing treatment.